

**What Is Claimed Is:**

1. An apparatus for controlling and operating resources of an idle screen for a mobile communication terminal having an idle screen control function, comprising:

the mobile communication terminal on which desired contents information is  
5 displayed through a mobile communication network;

a contents providing server for providing the contents information;

an idle screen providing server that provides a message corresponding to the provided contents information to a message providing server; and

the message providing server for receiving the message, which is converted  
10 to have an idle screen message format, from the idle screen providing server, and then providing the message to the mobile communication terminal through the communication network,

wherein the mobile communication terminal comprises a data viewer, which is a module for receiving push data or pull data for information set by a user and  
15 displaying those data according to a predetermined format, and

wherein the idle screen providing server comprises an idle screen control system that provides a function of generating an idle screen message, a contents information management server that provides a community service, a PDM server that performs an optimization function of personal information management, and a  
20 CRM server that provides a variety of services depending on a user.

2. The apparatus as claimed in claim 1, wherein the mobile communication terminal further comprises one or more of a display manager for displaying data constituting regions of an idle screen, an event handler for processing various events  
25 generated by a user or a mobile communication terminal, and a data interface module, which is responsible for an interface of a push data manager being a module for processing the push data or an idle screen control system of the mobile communication terminal.

30 3. The apparatus as claimed in claim 1, wherein the idle screen control system further comprises one or more of a push agent that transmits processed push data to

a push system of a service provider, a pull agent that searches data requested by the mobile communication terminal and transmits the searched data to the mobile communication terminal, a data formatter that converts data into a format that can be recognized by an idle screen control client of the mobile communication terminal, and  
5 an information match maker that searches data set in a profile by the user and extracts only the data set by the user from data received from the contents information server.

4. A method of controlling and operating resources of an idle screen for a  
10 mobile communication terminal in a method of controlling an idle screen of the mobile communication terminal in a system for providing contents information to the mobile communication terminal, comprising the steps of:

(a) allowing a user to join a service so as to receive contents information through the mobile communication terminal, and to set or select the contents  
15 information;

(b) allowing a service server to cooperatively operate with a contents information provider, classify multimedia information received from the contents information provider based on the contents information within the service server, and allocate a channel and a stack;

20 (c) allowing idle screen information corresponding to the contents information that is set or selected by the user to be pushed from the service server, and the pushed information to be displayed on an idle screen;

(d) allowing the user to pull detailed contents information among pushed contents information on the idle screen, which is displayed on an initial screen, and to  
25 receive the pulled contents information; and

(e) allowing the contents information that is received in step (d) to be read from a memory and a storage unit of the mobile communication terminal, and the contents information to be displayed according to a predetermined screen configuration of the mobile communication terminal,

30 wherein the contents information displayed on the idle screen in step (c) is displayed based on a given template configuration.

5. The method as claimed in claim 4, wherein the idle screen includes screens divided into a first region and a second region,

the first region is displayed as divided screens, and each of the divided  
5 screens has a display mode in which corresponding contents information is displayed in the form of multimedia, and

the second region includes a menu corresponding to the contents information displayed on the first region, or a quick launch, which can execute resources within a portable mobile communication device or a virtual machine (VM) application and  
10 can have access to a wireless Internet web site, which are provided in the form of an icon.

6. The method as claimed in claim 4, wherein the idle screen includes screens divided into a first region and a second region,

15 the first region includes a display mode in which the contents information is displayed as a sliding text or image in a list of a table form, and

the second region includes a menu corresponding to the contents information displayed on the first region, or a quick launch capable of executing resources within a portable mobile communication device or an virtual machine (VM) application and  
20 having access to an wireless Internet web site, which is provided in the form of an icon.

7. The method as claimed in claim 4, wherein the idle screen includes screens divided into a first region and a second region,

25 the first region includes a display mode in which a sliding text or image is displayed,

the second region is displayed as divided screens, and each of the divided screens has a display mode in which corresponding contents information is displayed in the form of multimedia, and

30 the third region includes a menu corresponding to the contents information displayed on the first region and the second region, or a quick launch capable of

executing resources within a portable mobile communication device or an virtual machine (VM) application and having access to an wireless Internet web site, which is provided in the form of an icon.

5           8. The method as claimed in claim 4, wherein the idle screen includes screens divided into a first region, a second region, a third region and a fourth region,

the first region includes a display mode in which a sliding text or image is displayed,

10           the second region includes a channel switch display mode in which respective contents information is channeled,

the third region is displayed as divided screens, and each of the divided screens has a display mode in which corresponding contents information is displayed in the form of multimedia, and

15           the fourth region includes a menu corresponding to the contents information displayed on the first region, the second region and the third region, or a quick launch capable of executing resources within a portable mobile communication device or an virtual machine (VM) application and having access to an wireless Internet web site, which is provided in the form of an icon.

20           9. The method as claimed in any one of claims 5, 7 and 8, wherein the divided screens in the form of multimedia, of the first region of claim 5, the second region of claim 7 and the third region of claim 8 display a title having the contents information built in.

25           10. The method as claimed in any one of claims 5 to 8, wherein the screens of the first region of claim 5, the first region of claim 6, the first region of claim 7, the second region of claim 7, the first region of claim 8 and the third region of claim 8 display channeled contents information, and the channels are divided and displayed.

30           11. The method as claimed in any one of claims 5 to 8, wherein the screens of the first region of claim 5, the first region of claim 6, the first region of claim 7, the

second region of claim 7, the first region of claim 8 and the third region of claim 8 are one of text information, text information and image information, table information, chart or graphic information, and motion picture information containing audio information or audio information.

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12. The method as claimed in any one of claims 5 to 8, wherein each of the icon forms can be added, omitted and changed in order, and can be selectively displayed according to the input of a given key and a given status of a terminal.

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13. The method as claimed in any one of claims 5, 7 and 8, wherein the screens of the multimedia form of the first region of claim 5, the second region of claim 7 and the third region of claim 8 are provided in the form of an icon, and

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detailed information is displayed on the whole screen, the whole display window, the whole of each of the regions or some of each of the regions in the idle screen corresponding to each contents information by clicking on the divided contents information icon.

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14. The method as claimed in claim 13, wherein the icon form displays multimedia information that replaces information to be represented, or multimedia information of a look-ahead form, which is reduced from information to be represented.

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15. The method as claimed in any one of claims 6, 7 and 8, wherein the screen of the first region of claim 6, the first region of claim 7, and the first region of claim 8 are formed in the icon form, and

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contents information corresponding to a multimedia icon such as sliding text or image is displayed in detail on the whole screen, the whole display window, the whole of each of the regions or some of each of the regions by selecting the icon form or inputting a key for confirming selection.

16. The method as claimed in claim 8, wherein a real-time icon is included in

the menu of the fourth region, and if the real-time icon corresponds to contents information that is changed in real time, the contents information is provided in real time by selecting the real-time icon.

5           17. The method as claimed in any one of claims 5 to 8, 15 and 16, wherein displays multimedia information that replaces information to be represented, or multimedia information of a look-ahead form, which is reduced from information to be represented.

10           18. A method of controlling and operating resources of an idle screen for a mobile communication terminal in a method of controlling an idle screen and providing/displaying information through a channel switch region for switching a screen for displaying information of a mobile communication terminal, comprising the steps of:

15           (a) allowing a user to input a direction key or a specific key that is allocated to switch a channel so as to switch information contents displayed;

             (b) reading information to be displayed on an idle screen of a channel before or after a current channel;

             (c) displaying contents information according to a predetermined screen configuration on an idle screen of the mobile communication terminal; and

20           (d) reading information to be displayed on the idle screen in step (b) from a memory and a storage unit of the mobile communication terminal, or requesting the information for a service server and then reading the information from the memory,

             wherein the contents information displayed on the idle screen in step (c) is displayed according to a given template configuration, and

25           after step (c), the displayed information is updated according to information received in a predetermined period.